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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/709,386

04/30/2004

Ramesh NAGARAJAN

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OLIFF & BERRIDGE, PLC.

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

MOTSINGER, SEAN T

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE

DELIVERY MODE

09/08/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction27074@oliff.com

jarmstrong@oliff.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/709,386	<b>Applicant(s)</b> NAGARAJAN ET AL.	
	<b>Examiner</b> SEAN MOTSINGER	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,9-14 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,9-14, and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Applicants Arguments/Amendments***

Applicants arguments/amendments filed on 5/18/2009 have been entered and made of record.

Applicants arguments/amendments with respect to 35 U.S.C. 112 have been full considered but are not persuasive the data source is still described in the preamble in a manner not disclosed in the specification (see rejection below). Furthermore the rejections under 35 U.S.C. 112 second have not been fully addressed only the antecedent basis problem was corrected.

Applicants arguments/amendments with respect to the prior art have been full considered but are moot in view of new grounds of rejection.

***Rejections under 35 U.S.C. 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 and 9-14 and 21 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application

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was filed, had possession of the claimed invention. The specification lacks support for the claim features "transmitted from a data source outside the object" these claim elements are not found in the specification. Further the claim amendment "reducing only resolution of the low spatial grey scale image data" is not supported by the original specification while there is clear support for, reducing resolution of the low spatial grey scale image data; there is no support for the exclusionary proviso of "only". Such a provision requires positive support for excluding other data from being reduced in resolution. The mere absence of a positive recitation is not a basis for an exclusion. Applicant has not indicated where he believes these claim features are supported.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 9-14 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claims 1-3, 9-14 and 21, Claim 21 claims "a selector plane" containing grey scale image data while claims 1 and 9 define a first plane containing high spatial frequency grey scale image data. From the specifications these elements appear to refer to the same element in the specification see paragraph 42. The selector plane is inadequately described in the specification to be unclear as to what applicant intends

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this claim limitation to mean. Typically a "selector" plane in this context is a binary image describing for example what data is on an upper or lower plane. However applicant describes the selector plane as a grey scale data see paragraph 42 "the high frequency image data becomes the selector plane" this is unclear. The this high frequency grey scale data of the selector plane is further disclosed and claimed as being compressed by a binary compression algorithm CCITT G4. It is unclear what applicant intends his "first" selector plane to be or what a selector plane is within the context of this invention. The description of it makes no sense is the first/selector plane binary or grey scale?

### ***Rejections Under 35 U.S.C. 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 9, 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Culciurean-Zapan et al US 6,343,159 ("Zapan") in view of ITU T.44 April 1999 (herein after "T.44") .

Re claim 1 Culcurian-Zapan et al discloses A computer readable storage medium storing a program for reformatting binary image data, the binary image data transmitted from a data source outside an apparatus into which the computer readable storage medium is installed, comprising: receiving a binary image from the data source (column 6 lines 10-20); converting the binary image data into grayscale image data (inverse halftone column 2 lines 30-40);

T.44 discloses segmenting gray scale image data into a first plane (mask plane figure 6a) having high spatial frequency gray scale image data (text see figure 6 (a)) and a second plane (Background plane see figure 6 a) having low spatial frequency gray scale image data (Contone see figure 6 a); and separately compressing the high spatial frequency gray scale image data in the first plane and the low spatial frequency gray scale image data in the second plane (page v second to last paragraph); reducing only resolution of the low spatial frequency image data to generate scaled low spatial frequency grey scale data ( note the resolution of the selector plane is not reduced while the background plane is reduced section 7.1)

The motivation to combine is that Zapan suggests that any image compression algorithm may be used in combination with his invention (see column 2 lines 30-40).

T.44 describes an image compression algorithm, Therefore it would have been obvious to combine T.44 with Zapan.

Re claim 9, claim 9 is claimed as an apparatus performing the method of claim 1  
(see rejection for claim 1.)

Claims 12-14 rejected under 35 U.S.C. 103(a) as being unpatentable over  
Zappan in view of T.44.

Re claim 12 Zapan and T.44 disclose all of the elements of claim 9 the do not  
disclose a marking device incorporating the apparatus of claim 9. However examiner is  
taking a official notice that marking devices are notoriously well known. The advantage  
to combine would to improve the photocopier by “achieving high compression and  
retaining quality” (page iv). Therefore it would have been obvious to one of ordinary skill  
in the art to combine Zapan, T.44 and examiners official notice

Re claim 13 Zapan and T.44 disclose all of the elements of claim 9 the do not  
disclose a photocopier incorporating the apparatus of claim 9. However examiner is  
taking a official notice that photocopiers are notoriously well known. The advantage to  
combine would to improve the photocopier by “achieving high compression and  
retaining quality” (page iv). Therefore it would have been obvious to one of ordinary  
skill in the art to combine Zapan, T.44 and examiners official notice

Re claim 14 Zapan and T.44 disclose all of the elements of claim 9 the do not disclose a document scanner incorporating the apparatus of claim 9. However examiner is taking a official notice that document scanners are notoriously well known. The advantage to combine would to improve the photocopier by “achieving high compression and retaining quality” (page iv). Therefore it would have been obvious to one of ordinary skill in the art to combine Zapan, T.44 and examiners official notice

Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zapan in view of T.44 in further view of Fan et al US 6400,844.

Re claim 2 T.44 and Zappan discloses all of the subject matter of claim 4, Fan discloses wherein segmenting gray scale image data includes segmenting gray scale image data into a plurality of blocks (see figure 2) before segmenting pixels in the blocks into the first plane and the second plane. The motivation to combine is

Re claim 10, claim 10 is claimed as an apparatus performing the method of claim 2 (see rejection for claim 2.)



Claims 3, 11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zapan in view of T.44 in further view Ferman et al Us 7,379,594.

Re claim 3 Zapan and T.44 disclose all the elements of claim 1 Ferman discloses enhancing the low spatial frequency gray scale image data in the second plane (column 1 lines 5-20). The motivation to combine is enhance one type of content without degrading another see column 1 lines 5-20). Therefore it would have been obvious to one of ordinary skill in the art to combine Zapan, T.44 and Ferman.

Re claim 11, claim 11 is claimed as apparatus performing the program of claim 3 (see rejection for claim 3.)

Re claim 21 Culcurian-Zapan et al discloses A computer readable storage medium storing a program for reformatting binary image data, the binary image data transmitted from an external source outside an apparatus into which the computer readable storage medium is installed, comprising: receiving a binary image from the external source (column 6 lines 10-20); converting the binary image data into grayscale image data (inverse halftone column 2 lines 30-40);

T.44 discloses segmenting gray scale image data into a selector plane (mask figure 6 a) and a background plane (background plane figure 6 a); Scaling the grey scale image data in the background plane (section 7.1) and separately compressing the

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background plane using JPEG (page V second to last paragraph) and the text plane using G4 compression (MMR compression or T.6 page V second to last paragraph).

The motivation to combine is that Zapan suggests that any image compression algorithm may be used in combination with his invention (see column 2 lines 30-40). Fan describes an image compression algorithm, Therefore it would have been obvious to combine Zapan with T.44.

Ferman discloses enhancing the low spatial frequency gray scale image data in the second plane (column 1 lines 5-20). The motivation to combine is enhance one type of content without degrading another see column 1 lines 5-20). Therefore it would have been obvious to one of ordinary skill in the art to combine Zapan, T.44 and Ferman.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN MOTSINGER whose telephone number is (571)270-1237. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bhavesh M Mehta/  
Supervisory Patent Examiner, Art Unit 2624

Motsinger  
7/28/2009